



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/462,345	01/07/2000	TAKAYUKI YOSHIGAHARA	KOIK-P9492	4972
29175	7590	12/08/2003		
BELL, BOYD & LLOYD, LLC P. O. BOX 1135 CHICAGO, IL 60690-1135			EXAMINER MYERS, PAUL W	
			ART UNIT 2612	PAPER NUMBER 7
DATE MAILED: 12/08/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/462,345

Applicant(s)

YOSHIGAHARA ET AL.

Examiner

Paul W Myers

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01-07-2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 0200 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Drawings*

1. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

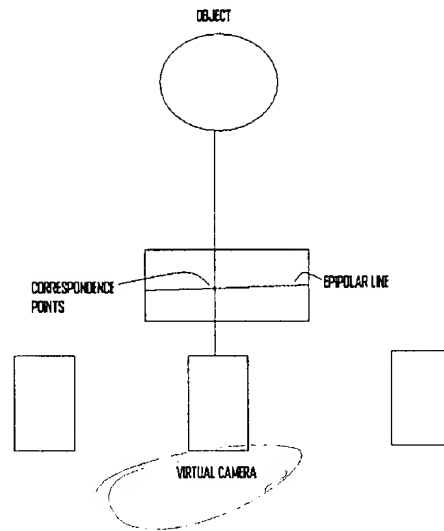
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-18 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

- a. In regard to claims 1 and 11, the specifications failed to disclose an apparatus or method where the an epipolar line is determined by connecting correspondence points of line of sight connecting virtual position and the object to be imaged. Refer to figure 1

Art Unit: 2612

Figure 1



True { The specifications and the drawings detail an epipolar line is determined by connecting  
corresponce points of line of sight between the reference camera and the detection  
camera.

b. In regard to claims 2-10, the claims are rejected as being dependent on claim 1.

c. In regard to claims 12-18, the claims are rejected as being dependent on claim 11.

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2612

- d. U.S. Patent No. 6,133,945 to Stuetzler for a reference camera and a detection camera that combined to create a virtual camera.
- e. U.S. Patent No. 6,483,949 to Yokoyama et al for creating a distance image based on an epipolar line.
- f. U.S. 2002/0113865 to Yano et al for a virtual camera and distance to object.
- g. U.S. Patent No. 5,745,126 to Jain et al for a virtual camera and distance to object.
- h. U.S. Patent No. 6,266,068 to Kang et al for small area and pixels.
- i. U.S. Patent No. 6,587,183 to Uomori et al for finding distance based on luminance.
- j. U.S. Patent No. 6,522,787 to Kumar et al for virtual image and virtual camera.
- k. U.S. Patent No. 5,383,013 to Cox for distance using epipolar lines.
- l. U.S. Patent No. 5,424,773 to Saito for the creation of a Pseudo camera.

Art Unit: 2612

- m. U.S. Patent No. 6,263,100 to Oshino et al for distance image, virtual position, correspondence points, and interpolation.
- n. U.S. Patent No. 6,323,895 to Sata for virtual camera images.
- o. U.S. Patent No. 5,680,474 to Iijima et al for a virtual camera using epipolar lines.
- p. U.S. Patent No. 4,825,393 to Nishiya for distance using epipolar lines.
- q. U.S. Patent No. 5,703,961 to Rogina et al for a multi-camera system for creating virtual images and virtual cameras.
- r. JP 11264724 A to Ashigahara distance images using epipolar lines.
- s. JP 408233527 A to Oshima for epipolar lines and gradation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul W Myers whose telephone number is (703) 305 4039. The examiner can normally be reached on Mon-Fri 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305 4929. The fax phone number for the organization where this application or proceeding is assigned is (703) 872 9314.

Application/Control Number: 09/462,345


Page 6

Art Unit: 2612

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306 0377.

PWM

PWM

  
WENDY R. GARBER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600